

Claims

- [c1] A mobile communication system powered by multiple batteries, comprising:
- (a) a handheld mobile telephone having a compact body, comprising a main battery as a primary power source for powering said mobile telephone, and a power connector for detachably connecting to an independent power source regardless of a connection of said main battery, wherein said main battery forms part of said mobile telephone compact body and is constrained by said compact body, and wherein said mobile telephone is functional without said independent power source;
 - (b) a power cable comprising a flexible power cord having a first end and a second end, a cable connecting means for connecting said first end to said independent power source, and a cable connector coupled to said second end for mating with said power connector in a secure and a detachable manner without falling off if said mobile telephone is handled;
 - (c) a supplemental battery, as said independent power source, having a compact body unconstrained by said mobile telephone compact body, comprising:
 - (i) an outer housing having a predetermined size and a

predetermined shape optimized for comfortably fitting in a pocket of a user of said mobile telephone;

(ii) a predetermined weight for comfortable portability by said user;

(iii) a predetermined power capacity at least two times greater than a capacity for said main battery, said predetermined power capacity is maximized as to said predetermined size and said predetermined shape; and

(iv) a battery connecting means for functionally connecting said supplemental battery to said cable connecting means to provide an appropriate, a flexible and a functional connection between said supplemental battery and said mobile telephone when said power cable is also connected to said mobile telephone, said functional connection permits powering of said mobile telephone by said supplemental battery; and

(d) a mobility advantage designed to ensure a portability and a usability for said mobile communication system similar to a portability and a usability for said mobile telephone which is part of said system, said mobility advantage comprising:

(i) a predetermined length for said power cable to allow comfortable operation of said mobile telephone connected to said supplemental battery via said power cable when said supplemental battery is associated with a clothing including clothing accessories of said user;

- (ii) a hands-free portability for said mobile telephone, said supplemental battery, and when appropriate said power cable, as separate units, using said clothing including clothing accessories; and
- (iii) no change in a size and a shape of a handheld portable part of said mobile telephone compact body when powered by said supplemental battery via said power cable.

[c2] A mobile communication system, powered by multiple batteries, having a maximum portable power, comprising:

- (a) a handheld mobile telephone having a compact body, comprising a main battery as a primary power source for powering said mobile telephone, and a power connector for detachably connecting to an independent power source regardless of a connection of said main battery, wherein said main battery forms part of said mobile telephone compact body and is constrained by said compact body, and wherein said mobile telephone is functional without said independent power source;
- (b) a power cable comprising a flexible power cord having a first end and a second end, a cable connecting means for connecting said first end to said independent power source, and a cable connector coupled to said second end for mating with said power connector in a

secure and a detachable manner without falling off if said mobile telephone is handled;

(c) a supplemental battery, as said independent power source, having a compact body unconstrained by said mobile telephone compact body, comprising:

(i) an outer housing having a predetermined size and a predetermined shape optimized for maximally fitting, in a comfortable manner, in a pocket of a user of said mobile telephone to minimize a wasted portable space and to maximize a portable power;

(ii) a predetermined weight for a comfortable hands-free portability by said user;

(iii) a predetermined power capacity at least two times greater than a capacity for said main battery, said predetermined power capacity is maximized as to said predetermined size and said predetermined shape; and

(iv) a battery connecting means for functionally connecting said supplemental battery to said cable connecting means to provide an appropriate, a flexible and a functional connection between said supplemental battery and said mobile telephone when said power cable is also connected to said mobile telephone, said functional connection permits powering of said mobile telephone by said supplemental battery; and

(d) a mobility advantage designed to ensure a portability and a usability for said mobile communication system

similar to a portability and a usability for said mobile telephone which is part of said system, said mobility advantage comprising:

- (i) a predetermined length for said power cable to allow comfortable operation of said mobile telephone connected to said supplemental battery via said power cable when said supplemental battery is associated with a clothing including clothing accessories of said user;
- (ii) a hands-free portability for said mobile telephone, said supplemental battery, and when appropriate said power cable, as separate units, using said clothing including clothing accessories; and
- (iii) no change in a size and a shape of a handheld portable part of said mobile telephone compact body when powered by said supplemental battery via said power cable.

[c3] A mobile communication system powered by multiple batteries, comprising:

- (a) a handheld mobile telephone having a compact body comprising a main battery as a primary power source for powering said mobile telephone, and a power connector for detachably connecting to an independent power source regardless of a connection of said main battery, wherein said main battery forms part of said mobile telephone compact body and is constrained by said compact

body, and wherein said mobile telephone is functional without said independent power source;

(b) a power cable comprising a flexible power cord having a first end and a second end, a cable connecting means for connecting said first end to said independent power source, and a cable connector coupled to said second end for mating with said power connector in a secure and a detachable manner without falling off if said mobile telephone is handled;

(c) at least one battery having a battery connector unable to appropriately connect to said cable connecting means, said at least one battery comprising a predetermined power capacity at least two times greater than a power capacity for said main battery;

(d) a minimal housing having a compact body for functionally containing said at least one battery to form said independent power source, said compact body is unconstrained by said mobile telephone compact body, said minimal housing comprises:

(i) a predetermined size and a predetermined shape for a comfortably fitting in a pocket of a user of said mobile telephone, said shape is contoured to functionally fit said at least one battery minimizing a wasted empty space and maximizing said predetermined power capacity as a function of said predetermined size and said predetermined shape;

(ii) a predetermined weight, when containing said at least one battery, for a comfortable portability by said user;
and

(iii) a power connecting means for functionally connecting said minimal housing containing said at least one battery to said cable connecting means to provide an appropriate, a flexible and a functional connection between said minimal housing containing said at least one battery and said mobile telephone when said power cable is also connected to said mobile telephone, said functional connection permits powering of said mobile telephone by said minimal housing containing said at least one battery; and

(e) a mobility advantage designed to ensure a portability and a usability for said mobile communication system similar to a portability and a usability for said mobile telephone which is part of said system, said mobility advantage comprising:

(i) a predetermined length for said power cable to allow comfortable operation of said mobile telephone connected to said minimal housing containing said at least one battery via said power cable when said housing is associated with a clothing including clothing accessories of said user;

(ii) a hands-free portability for said mobile telephone, said minimal housing containing said at least one bat-

tery, and when appropriate said power cable, as separate units, using said clothing including clothing accessories; and

(iii) no change in a size and a shape of a handheld portable part of said mobile telephone compact body when powered by said minimal housing containing said at least one battery via said power cable.

[c4] The mobile communication system of claim 3, wherein said mobile telephone power connector comprises a charging connector used for charging said main battery.

[c5] The mobile communication system of claim 3, wherein said mobile telephone power connector comprises a dedicated connector separate from of a charging connector used for charging said main battery.

[c6] The mobile communication system of claim 3, wherein said mobile telephone power connector comprises a connector having a plurality of functions.

[c7] The mobile communication system of claim 3, wherein said at least one battery comprises a rechargeable Lithium-Ion battery.

[c8] The mobile communication system of claim 3, wherein said at least one battery comprises a rechargeable Lithium-Ion Polymer battery.

- [c9] The mobile communication system of claim 3, wherein said predetermined power capacity for said at least one battery comprises at least 2000 mAh.
- [c10] The mobile communication system of claim 3, wherein said predetermined power capacity for said at least one battery comprises a least 3000 mAh.
- [c11] The mobile communication system of claim 3, wherein said predetermined size and said predetermined shape are optimized for maximally fitting said minimal housing, in a comfortable manner, in said pocket of said user to minimize a wasted portable space and maximize a portable power.
- [c12] The mobile communication system of claim 3, wherein said predetermined size for said minimal housing is less than a size for said mobile telephone compact body, and wherein said predetermined weight for said minimal housing containing said at least one battery is less than a weight for said mobile telephone.
- [c13] The mobile communication system of claim 3, wherein said predetermined size for said minimal housing comprises a maximum length up to 5 inches, a maximum width up to 3 inches and a maximum depth up to 1inch.

- [c14] The mobile communication system of claim 3, wherein said predetermined size for said minimal housing comprises a maximum length up to 5 inches, a maximum width up to 4 inches and a maximum depth up to 1.5 inches.
- [c15] The mobile communication system of claim 3, wherein said predetermined size for said minimal housing comprises a maximum length up to 6 inches, a maximum width up to 4 inches and a maximum depth up to 1.5 inches.
- [c16] The mobile communication system of claim 3, wherein said predetermined weight for said minimal housing containing said at least one battery comprises up to 400 grams.
- [c17] The mobile communication system of claim 3, wherein said predetermined weight for said minimal housing containing said at least one battery comprises up to 200 grams.
- [c18] The mobile communication system of claim 3, wherein a power display means disposed within said mobile telephone compact body is modified to display a power status for said minimal housing containing said at least one battery in addition to displaying a power status for said

main battery.

[c19] The mobile communication system of claim 3, wherein a power circuitry disposed within said mobile telephone compact body is modified to allow said minimal housing containing said at least one battery to exclusively power said mobile telephone without charging said main battery, unless prompted by said user, thus prolonging a life cycle and a capacity for said main battery by preventing its unnecessary charging.

[c20] The mobile communication system of claim 3, further comprising an adapter to functionally connect said cable connector to one of a plurality of different power connectors present in mobile telephones of various makes and models that are not able to directly mate with said cable connector, said adapter comprising:
a first adapter connector for mating with said cable connector; and
a second adapter connector functionally coupled to said first adapter connector, said second adapter connector is chosen from a plurality of connectors that respectively mate with one of a plurality of different power connectors present in mobile telephones of various makes and models;
wherein connections made by said first and said second adapter connectors occur in a secure and a detachable

manner without falling off if said mobile telephone is handled without supporting said connections.

- [c21] A minimal power supply for powering a mobile telephone, comprising:
- (a) a power cable comprising a flexible power cord having a first end and a second end, a cable connecting means for connecting said first end to said minimal power supply, and a cable connector coupled to said second end for mating with a power connector of said mobile telephone in a secure and a detachable manner without falling off if said mobile telephone is handled;
 - (b) at least one battery having a battery connector unable to appropriately connect to said cable connecting means, said at least one battery comprising a predetermined power capacity at least two times greater than a power capacity for a main battery of said mobile telephone; and
 - (c) a minimal housing having a compact body for functionally containing said at least one battery, said compact body is unconstrained by said mobile telephone compact body, said minimal housing comprises:
 - (i) a predetermined size and a predetermined shape for comfortably fitting in a pocket of a user of said mobile telephone, said shape is contoured to functionally fit said at least one battery minimizing a wasted empty space and maximizing said predetermined power capac-

ity as a function of said predetermined size and said predetermined shape;

(ii) a predetermined weight, when containing said at least one battery, for a comfortable portability by said user;

and

(iii) a power connecting means for functionally connecting said minimal power supply to said cable connecting means to provide an appropriate, a flexible and a functional connection between said minimal power supply and said mobile telephone when said power cable is also connected to said mobile telephone, said functional connection permits powering of said mobile telephone by said minimal power supply;

wherein said power cable has a predetermined length to allow comfortable operation of said mobile telephone connected to said minimal power supply when said power supply is associated with a clothing including clothing accessories of said user;

wherein said minimal power supply has a hands-free portability using said clothing including clothing accessories similar to a hands-free portability for said mobile telephone; and

wherein no change in a size and a shape of a handheld portable part of said mobile telephone occurs when said mobile telephone is powered by said minimal power supply.

